

NET PRINCIPAL LIMIT (NPL) FROM REVERSE MORTGAGES IN THE STATE OF NEW YORK: A COMPARATIVE ANALYSIS

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ABSTRACT

Reverse mortgages are increasing in popularity, but they remain complicated and confusing instruments. One of the concerns is whether reverse mortgages is accomplishing its objective of enabling seniors to tap into the equity of their homes and still stay in the home. We use loan level data from Department of Housing and Urban Development (HUD) and estimate closing and third-party costs. We are able to estimate the actual funds available from these mortgages originated in New York in 2001 versus 2011. We found that while the dollar amount of funds available has increased the proportion of the funds available to the appraisal value of the home remains relatively low.

INTRODUCTION

Home Equity Conversion Mortgages (HECM) or reverse mortgages are available to Seniors 62 years or older. The purpose of reverse mortgages is to allow seniors to take-out the equity in their homes and still be allowed to stay in the home. HECMs are available only through a Federal Housing Administration (FHA) approved lender. Under this mortgage, borrowers receive a lump sum or monthly payment, or a credit line that is not re-paid until the homeowner leaves the home.

To determine how much a homeowner can borrow, we first have to calculate the maximum claim amount (MCA). It is based on the lower of the property's appraised value or the limit set at 95% of the median home price for the area of the house with a cap on that median set by the FHA. In 2001, the cap was \$275,000, but by 2011 the cap had increased to \$625,500. The cap is important for our study as New York has one of the highest home prices in the nation. Age of the borrower and expected interest rates are used to calculate Principal Limit Factor (PLF) tables. The Initial Principal Limit (IPL) is determined based on the PLF and the MCA. The idea is that the value of the loan should approach the MCA when the homeowner leaves the home and repays the loan. The Net Principal Limit (NPL) is the lump-sum amount available to the borrower at closing. The

NPL is the IPL less the initial mortgage insurance premiums (MIP), third party closing costs, origination costs (with limit of \$6,000) and set-asides for service fees and home repairs.

This paper estimates the average NPL in the State of New York in 2011 versus 2001. From data provided by the FHA, we can determine average IPL and then estimate the MIP, third party closing costs and set asides to determine the NPL. The major objective of the HECM loans is to enable older homeowners to use the equity in their homes and still be able to live in the home. But, the costs of the HECM have raised concerns in the academic and popular press, Bishop and Shan (2008), Tedeschi (2009), Bernard (2010). If the HECM program is not providing a significant portion of the appraisal value of the home to the homeowner, this indicates the HECM program may not be accomplishing its objective. The purpose of this paper is to examine what changes have occurred in the appraised value, MCA, IPL and estimated NPL over the 2001 to 2011 period. The results will provide implications for the benefits and consequences of HECM loans. We add to the academic literature by focusing on one state for the analysis (New York) instead of using national data and by beginning with actual loan values instead of using hypothetical data.

The next section provides a brief literature review concerning the closing costs and cash flows received from HECM loans. Section 3 provides a description of the HECM data obtained from the Housing and Urban Development (HUD). Section 4 describes how the NPL is estimated for 2001 and 2011 and discusses the NPL relative to the IPL, MCA and the appraisal value of the home. Section 5 expands the funds availability discussion to indicate the first year drawdown relative to the NPL, IPL, MCA and appraisal value. The conclusion is provided in Section 6.

LITERATURE REVIEW

McCarthy and Wise (2010) and Hearn, Borstorff and Thomas (2005) study the retirement planning issues for the elderly in the United States. HECM as an answer to these has been studied also in the popular press, but there is scarcity of academic papers. Sacks and Sacks (2012) found that reverse mortgage can be a very important tool for retirees. This study also showed the optimal way to use the reverse mortgages.

The majority of academic research on reverse mortgages, Venti and Wise (1991), Merrill et al. (1994), and Sinai and Souleles (2007) use examples of hypothetical borrowers. Weber and Chang (2006) study the ethical concerns associated with the reverse mortgages. They use hypothetical examples to show what kind of ethical concerns can arise from use of the reverse mortgages. Redfoot, Scholen and Brown (2007) studied reverse mortgages as a potential mainstream solution to the shortfall in the retirement's assets for the seniors. AARP Public Policy Institute (2010) found reverse mortgages are generally more expensive and more complicated products. This study suggests that there should be more scrutiny from congress and regulatory agencies.

DATA

The Housing and Urban Development (HUD) provides loan-level data which includes the application date, type of floating rate index used, the age of the borrower and co-borrower, The property location, initial principal limit, expected interest rate, maximum claim amount, appraised value of the property, termination and assignment dates if available amongst other information.

First, we decided to concentrate on the State of New York, which is the home state for both authors. Second, all records without an IPL are eliminated from the study. Records without this basic variable also did not have most of the other variables that are used in the analysis. This gave an initial sample of 870 loans for 2001 and 4,039 loans for 2011.

Based on the HECM data from the HUD, the time value factor for each loan in the data base can be calculated as IPL/MCA . Year 2011 had 1,010 of the records (25.0%) had factors of 0.99 or higher, and in 2001, 404 records (46.4%) had a factor 0.99 or higher. The case status information (which is in the HUD data base for each loan) in Table 1 provides insight into the reasons for these unreasonable time factors.

Table 1: Case status of loans with calculated factors 0.99 or higher

Case status	2001	2011
1: loan in suspension; MIP not paid	10.4%	75.9%
2: pending endorsement, MIP paid		0.3%
3: holding processing		
4: endorsed, HUD has insured the loan	16.1%	1.6%
5: loan has been assigned to HUD	2.2%	
6: canceled loan	9.4%	22.2%
7: reinstated loan		
8: non-claim termination	60.6%	
9: termination after assignment	0.5%	
10: shortfall claim termination	0.7%	

Most of the loans with factors 0.99 or higher in 2001 (60.6%) appear to have been paid-off without any claim being filed with the HUD, but the most of the loans with factors 0.99 or higher in 2011 (75.9%) appear to still be in the development process since the MIP has not been paid. Regardless of the reason, all loans with calculated factors 0.99 or higher are eliminated from the analysis. In addition, non-traditional types of loans (type = 1 (HECM-for-purchase) and 2 (refinance)) and loans with total cash drawdowns less than or equal to \$0 are eliminated from the analysis. The final sample consists of 2,878 loans in 2011 and 462 loans in 2001.

RESULTS

Table 2 provides the estimate of the NPL for HECM loans in the State of New York for 2001 versus 2011. The appraisal, MCA and IPL are average values provided from the HUD data base. For a more complete discussion of these variables, see Bansal and Ellis (2014). The appraisal, MCI and IPL all increased by more than 70% over the 2001 to 2011 period. This is due to increase in home prices and increase limits on the amount a homeowner can borrow under the HECM program.

Table 2: NPL Estimate for New York

	2001	2011	% change
Part A: Estimate of NPL			
Appraisal	\$221,054	\$377,214	70.6%
MCA	\$183,099	\$354,182	93.4%
IPL	\$123,597	\$223,353	80.7%
Initial MIP = 2% of MCA	\$(3,662)	\$(7,084)	93.4%
Closing Costs			
Origination fee	\$(4,120)	\$(6,000)	45.6%
Third Party	\$(2,850)	\$(3,622)	27.1% = cumulative inflation
Set Asides			
Repair	\$(7,398)	\$(5,126)	(30.7%)
Service Fees	\$(3,378)	\$(4,440)	31.5%
Total Costs	\$(21,408)	\$(26,272)	22.7%
NPL	\$102,189	\$197,081	92.9%
Part B: NPL as a % of			Absolute change
Appraisal	42.6%	55.2%	6.0%
MCA	55.8%	55.6%	(0.2%)
IPL	82.7%	88.2%	5.5%

The mortgage insurance premiums (MIP) are one of the more controversial elements of HECM. During the period of this analysis, borrowers in the non-savers HECM program were required to pay 2% of the MCA as an initial premium and 1.25% of the amount of the loan outstanding annually. Since less than 10% of the HECM loans in 2010 were HECM-Saver loans, the 2% MIP is used in this analysis. The purpose of these insurance premiums is to allow the FHA to cover the losses of financial institutions that offer HECMs in case the homeowner is unable to re-pay all or part of the loan outstanding. Since the HECMs are guaranteed by the FHA, the financial institutions take very little risk in providing these mortgages. The initial MIP almost doubled 2001 to 2011 increasing from \$3,662 in 2001 to \$7,084 in 2011. This is due to the 93.4% increase in the MCA over this period.

The FHA sets a limit on the origination fee that can be charged on HECM loans based on the MCA. The fee is 2.25% on the first \$200,000 of the MCA plus 1% thereafter with a cap of \$6,000 and a floor of \$2,500. In 2001, the average MCA on NY HECM was \$183,099 making the origination fee 2.25% of the MCA which is \$3,662. By 2011, the MCA had increased to \$354,182. The origination fee was 2.25% on the first \$200,000 and 1% on the remaining \$154,182 for a fee of \$6,042. Since this is greater than the cap \$6,000 allowed, the analysis estimates the origination fee in 2011 to be \$6,000. This is an increase of 45.6%

Third party fees include the appraisal, attorney fees, flood certification, employment verification, inspection, postage/courier, the survey, title search and title insurance. For 2012 Bankrate estimates third party fees on a \$200,000 mortgage to average \$3,622. We assumed that third party fees have increased with the rate of inflation since 2001. The cumulative inflation rate over the 2001 to 2011 period is estimated by us inflation calculator [to be 27.1%. Applying this rate to the third party fees in 2011 produces average third party fees in 2001 to be \\$2,850.](#)

[The FHA permits financial institutions to charge up-front fees for home repair and service fees which are paid at closing by the borrower.](#) The repair fees are for the immediate repair of the property, and the service fee is to compensate the financial institution for administration of the loan. Financial institutions are allowed to charge up to \$30 per month for the service fee. The service fee charged by the HECM loan is the present value of the anticipated service fee over the life of the loan and is charged to ensure the financial institution is compensated. The inclusion of both of these fees decreased 2001 versus 2011. For the repair fee, 30.7% of the loans were charged a repair fee in 2001, but only 16.3% of the loans had a repair fee in 2011. The service fee is more dramatic with 94.2% of the loans in 2001 having a service fee, but only 1.7% of the 2011 loans had a service fee. See Bansal and Ellis (2014) for a further discussion of this issue.

In 2001, if a repair fee was charged, the average fee was \$7,398, but the average repair fee had decreased to \$5,126 by 2011. This is a surprise since the appraisal value of the homes had increased 70.6% over this period. On the other hand, if a service fee is charged in 2001, the average fee was \$3,378 which had increased by 31.5% to \$4,440 by 2011.

Based on these estimates, for 2001, the average costs of an HECM in 2001 was \$21,408 which increased 22.7% by 2011 to \$26,272. This is less than the estimated cumulative inflation rate of 27.1%. All fee increased by more than the cumulative inflation rate except the set-aside for repairs which decreased by 30.7%. This decrease helped off-set the increase in the other costs associated with a HECM loan.

Based on our estimates, the average NPL in 2001 was \$102,189, but this figure increased 92.9% to an average NPL of \$197,081 in 2011. The increase in the funds available from a HECM loan appear to be due to increase in the appraisal value of the home, increase in the average MCA (due to the increase in the HECM cap allowed by the FHA), and an increase in the costs of the loan that is less than the cumulative inflation rate.

Part B of Table 2 indicates the absolute change in the NPL as a portion of the appraisal value of the home, the MCA and the IPL. The major purpose of HECM program is for homeowners to be able to use the equity in their home and stay in the home. The amount of funds a homeowner can potentially borrow relative to the appraisal value, MCA, and IPL indicates the success of the program at meeting its objective.

Appraisal values of the homes used as collateral for HECM loans increased 70.6% from 2001 to 2011 which is about 60% more than the cumulative inflation rate of 27.1%. In 2001, a homeowner in NY on average could receive only 42.6% of the appraisal value of the home. By 2011, this figure had increase 6.0% to 55.2%. While this is an improvement in the ability of homeowners to obtain funds from the HECM program, almost 45% of the average appraisal value remains unavailable to the home owner.

The portion of the MCL that a homeowner can borrow was 55.8% in 2001 and 55.6% in 2011 making this figure relatively stable. The MCA increased 93.4% in 2011 relative to 2001 and the

NPL increased 92.9%. This result indicates that the homeowner is able to tap into about the same portion of the MCA in 2011 as in 2001. The average IPL in 2001 was \$123,597 and increased 80.7% to an average of \$223,353 by 2011. In 2001, the estimated NPL was 82.7% of the IPL which had increased to 88.2% in 2011. This favorable effect seems to be due to the lower than inflation increase in the total cost of the loan.

It appears that homeowners are about to obtain a significant portion of the IPL, but this figure is kept low due to a low FHA cap relative to the appraisal value of the home. Consequently, homeowners in 2011 are able to obtain on average only about 55% of the appraisal value of their homes through HECM loans. This indicates the HECM program may not be accomplishing its major objective.

To further examine the usefulness of the HECM program in allowing homeowners to tap into the equity of their homes, we examine the average first year drawdown relative to the NPL, IPL, MCA, and appraisal of the house for 2001 versus 2011. Table 3 presents these results.

Table 3: Average First Year Drawdown

	2001	2011	Absolute change
Average first Year drawdown	\$68,527	\$168,814	
As a percent of			
Appraisal	31.0%	44.8%	13.8%
MCA	37.4%	47.7%	10.3%
IPL	55.4%	75.6%	20.2%
NPL	67.1%	85.7%	18.6%

There has been a 146.3% increase in the average first year drawdown from \$68,527 in 2001 to \$168,814 in 2011. This supports Wyatt (2012) who indicated that HECM borrowers are taking larger amounts of their available funds earlier. Since interest accumulates on the amount of funds outstanding, this may not be positive for the homeowner or his heirs who will need to repay the loan plus accrued interest when the borrower leaves the house.

The larger drawdown caused the portion of the average first year drawdown related to the NPL, IPL, MCA and appraisal value to increase by 10.3% to 18.6%. The borrower also appears to be withdrawing a larger portion of the funds available to him faster. In 2001, the first year drawdown was only 67.1% of the NPL, but by 2011 this figure had increased to 85.7%.

Despite the increase in the first year withdrawal in dollar amounts and relative to the NPL, the portion of the appraisal value that is withdrawn remains low. In 2001, the homeowner withdrew on average 31.0% of the appraisal value of the home in the first year and by 2011 this figure had increased to 44.8%. This is both positive and negative. The positive is that the HECM program appears to have improved in allowing borrowers greater access to the equity in their homes. The

negative is that even though the borrower appears to be withdrawing as much as he can earlier, the amount withdrawn the first year is less than half of the appraisal value of the home. Another consideration is that the larger dollar amount of the withdrawal causes interest to accrue faster. The negatives indicate that the HECM loans may not be an efficient method to tap into the equity of an older person's home.

CONCLUSIONS

Using data from the FHA to find the average IPL, we estimated the initial MIP, closing costs, origination costs and set-aside fees for HECM loans in the State of New York for 2001 versus 2011. The purpose is to provide evidence as to whether the HECM program is meeting its objectives.

This paper indicates that the average home appraisal values increased 70.6% over the 2001 to 2011 period, and the net principal limit (NPL) or the amount available to the borrower to withdraw increased 92.9%. This indicates home owners are able to obtain a greater portion of the equity in their homes in 2011 versus 2001. But, the analysis also indicates that the NPL was only 42.6% of the appraisal value of the home in 2001 and 55.2% in 2011. While the average borrower is able to obtain a larger portion of the home appraisal value in 2011 versus 2001, the HECM program blocks the borrower from 45% of the appraisal value of the home. The analysis also indicates the borrower first year withdrawal is a larger portion of the NPL in 2011 versus 2001 indicating the borrower is accessing more of his credit limit earlier. Despite the increase in the first year withdrawals, in 2011 the first year withdrawal was only 44.8% of the appraisal value of the home. Based on this analysis, HECM loans may not be the most efficient method to convert the equity in a home into cash.

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